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DYNAMIC FOREIGN POLICY INTERACTIONS

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13. ABSTRACT

An approach to the study of the interactions of nations is developed in this paper based on the perspective that nations develop routines for dealing with each other, routines of reciprocity and bureaucratic inertia. More precisely, this approach seeks to specify how decision makers select types of action and reactions from an inventory of foreign policy outputs to meet different kinds of routine and non-routine international situations. The theoretical structure of this approach is laid out which essentially posits that the foreign policy output of a nation is a function of reciprocity and bureaucratic inertia. To differentiate the relative impact of each, the concept of uncertainty is introduced. Finally, it is acknowledged that nations are not all governed by theoretical restraints imposed on them through the parameters of inertia and reciprocity, that there are other forces at work both within these nations and within their environment which influence the impact of inertia and reciprocity. Several such forces are identified and briefly discussed (e.g. domestic events, and third party actions).

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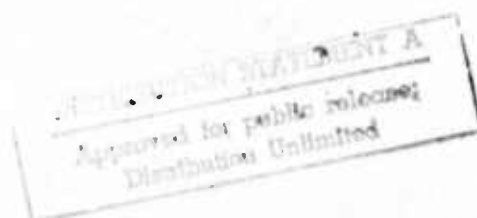| KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
Reciprocity						
Bureaucratic inertia						
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Information						

DYNAMIC FOREIGN POLICY INTERACTIONS[1]

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July 15, 1973

STATEMENT OF PERSPECTIVE

The approach developed here is designed to increase our under-
standing of the way nations deal with each other. It is based upon
the belief that the behavior of one nation towards another is a
function of its previous experience in dealing with that nation. In
short, it is the perspective of this approach that nations develop
routines for dealing with each other, routines of reciprocity and
inertia. Other forces which affect the exchanges between two nations
do so in such a manner as to strengthen or weaken the effect of one
or the other of these two routines.

In attempting to develop a greater degree of knowledge about
the interaction of nations in the international system, we consciously
strive towards an explanation of this interaction. What underlies
this approach is a desire to specify how national decision-makers tend
to select types of actions and reactions from an inventory of foreign
policy outputs to meet different kinds of routine and non-routine
international situations. Several basic assumptions underlie this
approach.

a) The concept of foreign policy as a set of decisions
   by officials is adopted.
b) Foreign policy activity can be understood as con-
   sisting of discrete behaviors representing the
   outcomes of these decisions.
c) Policy can be interpreted as the aggregation of
   these behaviors according to some logic imposed
   upon them by the actor or the observer.
d) The behavior of one actor towards another actor
   (foreign policy) is responsive to the actions of
   other nations and involves efforts to influence
   who the leaders of these nations will be, what
   decisions they will take, and how they will define
   the relations between their nation and others.

e)   Foreign policy is made in an environment by
decision-makers who have mixed desires and
domestic constraints to cope with. Their
activity is essentially a process of adap-
tation to the external and internal environ-
ment which they seek to coordinate in an
effort to maintain economy and sovereignty
of the nation state.

On a still more abstract level it is argued that national

decision-makers consciously choose policy which may affect the over-

all patterns of cooperation or conflict in the international system.

This type of explanation generally assumes that there is at least

one individual within the nation who understands the dynamics of co-

operation and conflict in the system, who knows how other statesmen

and his own constituents will react to a given policy, and who uses

his knowledge to get around the constraints which reactions impose.

This is the argument made by Stanley Hoffman (1968) in his delineation

of roles in American foreign policy. This was also the type of argu-

ment made by William Langer (1931) in his discussion of the policies

and motivations of Otto von Bismarck.

RELATION TO PREVIOUS WORK

One of the earliest advocates of the events approach to inter-

national interaction was Charles McClelland. He suggested that once

the relations of international politics were broken down to their

most elementary form they can be selected and organized according to

two references--of actors and interaction. For McClelland, inter-

action analysis or demand response pattern analysis has as a preoccu-

pation, tracing the resulting patterns and trajectories of actions.

He suggests that national systems have access to only a limited inventory of demands and responses in coping with the situations produced by system disturbances. How the government of the national system tends to select types of actions from the inventory to meet different kinds of non-routine international situations provides evidence of its operational code in international politics (1966:105).

Recently several theorists have underscored the importance of considering the total interactions, especially those between antagonists. Burton (1968) asserts that the progression towards war depends upon the equal contributions from both sides, each being governed by perceptions of threat. North and his colleagues assert that war may occur in a number of ways, but the chances of its occurrence are increased by the hostility in the crisis atmosphere generated by the joint exchanges of parties involved (1968). Zinnes has been concerned both with the expression of hostility and with its perception and the ensuing responses (1968). These authors all emphasize the process of exchange that underscores the symmetric importance of both participants and actions. Thus, the flow of foreign policy exchanges between nations has certainly been the topic of discussion, debate, and analysis. It has infrequently been the target of formal theoretical development, however.

While our current problems stem from a lack of formal explanation of the patterns and interactions between nations, it must be pointed out that the difficulty has not been because we have lacked a basis for making formal explanations. The possibility of using the international communications literature, (which is rich in suggestions

for formulating formal theories) has been made by a number of international relations scholars (Deutsch (1953), McClelland (1967), and Phillips (1973)). Quincy Wright (1955:269) defined international communications as the "art of using symbols to express, to inform, to formulate, or to influence the opinion and policy of groups on matters of importance for international relations. In a narrower sense it is the art of using symbols expressive of one nation to influence another. As a discipline it is the philosophy guiding that art and the science analyzing international communications, determining their purposes, and measuring thier effects." In fact, we can view the entire political process as a process of mutual modification of images through feedback in communication (Boulding, 1956:102).

Consider the simple communication system. Such a system has a message and three operating parts: a sender, a medium or channel and a receiver. There are several difficulties to be encountered in the process of communication, however. Does the receiver actually receive the message as the sender intended or does interference in the channel distort or garble the message? An excellent review of these problems can be found in Alan Whiting's (1969) discussion of the problems the United States faced in the bombing of North Vietnam. The United States had to convince the Chinese that its aircraft did not intend to cross the Chinese border. Whiting points out that many statements and subsequent actions were repeated to insure that the Chinese correctly understood the intentions of the United States. Such complex communications structures are a common feature of the international environment. Nation

states are information processors dealing with so much information that
their information gathering powers are frequently taxed. How nations cope with
this problem and to what degree these communications affect international
relations is a crucial question in international relations according
to Karl Deutsch (1968), who has hypothesized that wars are caused by
the inability of decision-makers to handle message overload situations.

CONCEPTUAL SCHEME

To further develop this explanation of foreign policy outputs,
consider the competitive international environment in which a nation
operates. The behavior of one actor toward an object state is in part
a response to the strategic problems which that actor faces with respect
to its understanding of the other's goals and activities. It is not
especially daring to suggest that behavior begets behavior, we simply
expect that nations will generally act much like individuals, in the
sense that there is a strong tendency to return behavior similar to
that received. Nations are assumed to be operating not in a vacuum but
in a real world in which inter-nation interaction is a reality. A
nation, as an actor in the international system, will largely base the
nature of its interaction with the second nation or object on the
nature of the last or last several actions of that nation towards it-
self. By way of example, consider the work of Lewis Fry Richardson
and his contention that the rate of change in hostility of one nation
towards a second depends upon the level of hostility which the second
harbors towards the first.[2] This idea of a relationship between the

actions of one nation and the past behavior of the object nation has been generalized by Dean Pruitt (1969) with the introduction of the concept of reciprocity. "The change in one party's level of output on a given dimension often produces reciprocity (also called reciprocal change) i.e., a resulting change in the other party's level of output on the same or another dimension."[3] These thoughts can be expressed in the following statement: <u>an actor's behavior towards a specific object is a function of the behavior which it received from the object;</u> more simply put, behavior begets behavior. Mathematically, this statement is represented by the following equation:

$$B_{nq,m,t} = \sum_{m=1}^{p} \alpha_m B_{qn,m,t}$$

where

$B_{nq,m,t}$

is the behavior of nation n directed toward nation q on dimension m at time t.

$\sum_{m=1}^{p} \alpha_m B_{qn,m,t}$

is the weighted sum of each of nation q's behaviors toward n as measured, respectively, along the P dimensions of behavior. The weights (α's) used in computing the sum are the relative importance of nation q's behavior, on each dimension, in influencing the behavior of nation n on dimensions m.

This equation states as a working hypothesis that an actor's behavior results from the patterns of action of its object. Others working in international relations, Tanter (1972), Azar (1970), and Leng (1972) suggest similar hypotheses.

This can be called a tit-for-tat model of the relations between nations. But international relations must certainly be more

than a tennis match in which each actor's response is to his object's service. There are forces at work over time within a nation which work to insure specific strategies be employed when dealing with specific object nations. Halperin suggests that "most of the actions taken by bureaucracies involve doing again or continuing to do what was done in the past. In the absence of some reason to change their behavior, organizations keep doing what they have been doing" (1970:9). Bureaucratic inertia, as an explanation of performance in organizations, is appealing and leads to the working hypothesis that a nation's behavior in foreign policy results, in part, from its own prior patterns of action. Stated formally: <u>a given nation's behavior toward a specific object is a function of its previous behavior toward that object</u>. Mathematically this can be translated into the linear equation:

$$B_{nq,m,t} = \alpha_m B_{nq,m,t-1}$$

where the symbolization is identical to the first equation and $t-1$ is a time period earlier. Combining the two approaches together to form a single equation:

$$B_{nq,m,t} = \alpha_m B_{nq,m,t-1} + \sum_{m=1}^{P} \alpha_m B_{nq,m,t}$$

The meaning of the individual terms remains the same as in the two preceding equations.

(1)   The new equation expresses mathematically the contention that foreign policy dynamics are powerfully influenced by both bureaucratic inertia and reciprocity.

McClelland (1961) suggests that the workings of a modern foreign office resemble the day to day operations of a well run industrial plant. Following this suggestion we may develop the tit-for-tat models somewhat further. Multitudes of difficulties and problems would be received and dispatched from the daily flow by specialists in handling foreign affairs. To cope with this complexity, experts reassign responsibility for monitoring the exchanges with specific countries. The ability of the experts to deal with their assigned tasks is in part a function of their understanding of the intent underlying the patterns of behavior which were received from object nations in the recent past. In order to know the appropriate response to make to an object nation, the experts must be able to understand clearly and unambiguously the messages which they are receiving from the object. Halperin and Kanter suggest, "the nations affect the actions of one another less by physically compelling changes in behavior than by acting on one another's perceptions and expectations; interaction among nations is primarily a matter of threats, promises, and warnings designed to influence behavior by persuasion. Accordingly, the primary vehicle for the exercise of international influence takes the form of 'signals' among international actors. Actions--the outputs of the national security bureaucracy--are 'signals', designed to persuade another nation to alter its behavior in the preferred direction" (Halperin and Kanter, 1973:40).

Thus, the transmission and reception of information is a major feature of the behavioral exchanges between nations. Every act of a nation can be considered as a potential piece of information communi-

cating to other nations the intense desires or dislikes of the acting nation. In addition, the variety of behavior is itself, an important aspect of the information conveyed. If the multitude of international behaviors is structured into a basic set of patterns, the variety of international interaction can be shown to reduce to the knowledge gained from each of these patterns of behavior. If, for instance, the behavior of nations reduces to eight basic patterns, then there are eight areas in which information is being transmitted.

There are two procedures for delineating these basic patterns of interaction. The first technique would be to employ a large number of variables measuring interaction and to factor these variables to delineate a basic set of patterns or underlying dimensions (Phillips, 1969; McClelland and Hoggard, 1969). Another technique would be to specify a set of variables which are thought to be logically discrete and all inclusive. The second approach would have to specify the underlying rationale for such a collection of variables. The CREON data set has a group of variables which seem to meet the requirements for the second approach and it is accepted in this development. There are eight variables which indicate a continuum of commitment of resources on the part of the nation using them. These variables are laid out in Table 1. Notice that they vary from procedural discussions to military actions. It is felt that nations choosing foreign policy output from any one of these eight acts are signaling varying levels of commitment of natural resources from relatively minor commitments for procedural acts through relatively severe commitments for military actions.

The amount of information being conveyed between nations in any period of time must depend upon both the number of signals transmitted from nation to nation as well as the variety of signals. Techniques have been developed to measure and account for both the variety of signals transmitted and the amount of information transmitted. The heterogeneity of these signals--that is the variety of basic patterns at any point in time is a measure of the uncertainty which would attend any attempts to specify the sender's selection process (Cherry, 1957; Shannon and Weaver, 1949; Ashby, 1952).

Information theory provides an excellent measure of the uncertainty, H, present in a set of signals;

$$H = \sum_{i=1}^{N} - P_i \log_2 P_i$$

where P_i is the independent probability of the occurrence of signal type I and there are n types of signals. Thus, from the probabilities P_i of different types of signals occurring in a given time period (same month), the uncertainty associated with the score for that period can be ascertained. If all outputs are equally likely, uncertainty is at a maximum. It is common to divide the actual uncertainty by the maximum value, deriving as a result the percentage of (maximum) uncertainty (H_{rel}), which is more easily comparable across sources with differing sets of signals.

Let us consider two examples: first the case in which a particular nation chooses to send to a particular object 80 acts in a given time period. The distribution of these acts is such that each of the

eight variables are used ten times. Notice that the actor has chosen to send an equal number of each type of signal to the object. By way of contrast another nation sends the same object 80 acts in the same time period but they are all the same act. The relative uncertainty figure for the distribution in Example one would be 1.00, and that for the distribution in Example two would be 0.00. Thus, the implications of uncertainty are that in the equal probability instance, there is no way to judge if further occurrences would be more likely to fall in one category rather than another. In the second example, we can see that the object nation would be more likely to expect to receive the same act he has been receiving in the last eighty sequences. Thus an observer's uncertainty as to the likely activity of the actor represented in the second example is reduced. The smaller the H_{rel} figure, the more certain it is that a nation will choose a particular activity. McClelland has interpreted this relative uncertainty by suggesting: "A common sense way to view a series of H_{rel} numbers is to think in terms of a 'fanning out' toward equality of distribution across the category system with the larger figures and a channeling in of the distribution towards relatively frequent occurrences in fewer categories with the smaller figures. As the ratio approaches 1.00 it suggests not only that everything that could happen has been occurring but also that the behaviors have shown increasing signs of disorderliness. The information measures do not tell us what the particular lack of ordering is, but they do give us a technical indication of a large amount of variety in the emissions. As the

ratio decreases towards .000, the suggestion is that (1) there may be present a large amount of highly patterned and repetitive behavior and a limited variety in the action or (2) very little is occurring" (1973:91).

A long series of analyses by Charles McClelland and his associates (1965, 1968, 1973) have been carried out with the variety measure introduced above to establish how it functions in crisis and non-crisis periods. They have demonstrated that the mix of behavior does indeed change in a crisis towards greater variety. The basic results are these: (1) With occasional exceptions, a H_{rel} of .700 or higher is associated with crisis months and only with crisis months. (2) If we operationalize the beginning and duration of international crises with a H_{rel} of .700 or higher, we are able to state when a particular crisis began and how long it lasted. (3) All non-crisis periods, with rare exceptions, have monthly H_{rel} figures below .700 (McClelland, 1973:92-93). The literature on communications in international relations argues that in periods of crisis, system overload occurs and actors display an inability to respond consistently to foreign policy inputs (Holsti, 1965; Burton, 1968). This would suggest that for dyads in periods of high relative uncertainty, usually crises, nations are less able to respond consistently to their object nation's activities. But it seems to be the case that in periods less uncertain than crises, nations are capable of responding more reciprocally when they know more fully their opposite's interactions. This point needs further development.

Burton has suggested that one of the "tricks" in negotiation
is that actors should send frequent responses if they wish to communi-
cate changes in the perception of the situation. He also suggests that
the process of resolution of conflict is in part a process of testing
whether information is received as it was transmitted (Burton, 1969:
54-55). One function of ambiguity and noise in message signals sent
from one nation or another, as pointed out by Jervis, is "to make it
easier for actors to strike and maintain bargains. At first glance the
contrary argument seems more plausible--that the easier it is for each
side to make its views understood (at least on the semantic level), the
more the bargaining process is facilitated--. . . this position might
be correct if the actors could make the other side believe they would
act the way they said they would" (1970:127). But since this is normally
impossible, noiseless bargaining would make simple initiatives less
plausible and thus more likely to be discounted.

In communications terminology noise is characteristic of a
communication period with high relative uncertainty. Thus when nations
are sending multiple types of signals it would appear easier for other
nations to respond with what they judge to be appropriate behaviors.
This is so because multiple types of signals allow a nation to test
whether its intent was correctly received by analyzing the multiple
responses. It is also likely to be the case that if one nation wants
the other to believe its intent, it had better signal its intent in
multiple ways or by orchestrating its signals.

Nations which are interacting frequently must consider how they can make other nations understand the intent of their communications. If a nation wishes to orchestrate its foreign policy outputs to facilitate understanding:

1) It must design and deliver messages in a way that will gain and hold the attention of the intended object.
2) The signals must adequately refer to past experience between actor and object.
3) The communicator must choose actions to match his verbal statements so that the message is convincing.
4) The communicator must be able to notice and interpret any responses as either feedback or as the performance of preferred behavior before he can estimate his degree of satisfaction measured against his country's objectives.[4]

Now let us interpret what we seem to be getting at in this discussion. When single signals ($H_{rel} = 0$) are sent, they are likely to receive only a moderately standard response. Slightly more complex messages (with a relative uncertainty value greater than zero but less than 0.5 for any given period) are somewhat more easily responded to in a systematic fashion. On the other hand, those messages which are quite heterogeneous in the number of signals sent (but short of the complexity facing crisis participants) can be responded to clearly and consistently.

This leads to the following assumption:

(2) Provided that the communications channel is not overloaded, the more heterogeneous the signals sent from one nation to another in a given time period, the more certain are observers in specifying an appropriate response.

Extrapolating from this discussion, let us suggest that when there is a homogeneous signaling from one nation to another (that is,

when the redundancy in signals is high) one would expect the recipient
nation to identify less clearly the intent of the actor and to act on
its own inertia. For periods of time in which there is a heterogeneity
of signals (behaviors), and thus a richer mix of behavior for that time
period, objects are more certain about the implications (real or poten-
tial) of the actor's behaviors. In these periods of time, reciprocity
should exert a stronger influence than inertia upon foreign policy
outputs. Hence, objects adjust to actors' strategies more readily in
periods of high uncertainty and tend to continue doing what they had
done in the past during periods of low uncertainty. Formally:

(3)

> In periods of high relative uncertainty reciprocity
> is a better predictor of foreign policy output of
> a nation than is inertia, while in periods of low
> uncertainty inertia is a stronger influence than
> is reciprocity.

What we have tried to accomplish here is a differentiation between
when bureaucratic inertia on the one hand, and reciprocity on the other,
tends to best explain foreign policy output. In order to facilitate this
effort we have relied upon a new concept: uncertainty. The concept is
given meaning in information theory and that meaning has been borrowed
here. Three points are worth reiterating:

1) Information is assumed to be associated with a
   selection process. That is, there is available
   to the sender a choice of signals to be sent.
2) Such a process is basically statistical in the
   sense that it involves probability considerations
   concerning the likelihood that a given signal
   will be sent.
3) The amount of communication in the sense of trans-
   mission of knowledge (semantic information) is
   not considered in information theory.

Returning once again to the discussion of a well-run foreign office, we note that such an office is composed of country specialists who:

1) Monitor, categorize, sort and interpret incoming signals; and
2) Develop routines for converting the signals received into different information to serve specialized purposes.

Because of shared experiences in dealing with each other, an ordered pattern of understanding takes shape jointly for both the actor and the object. The information filters, i. the form of these specialists which each nation relies upon become more adept at processing more and increasingly complex information and in responding in more heterogeneous patterns of behavior. This reasoning leads to:

(4) The development of complex patterns of interactive behavior is dependent upon relatively frequent and consistent exchanges in the past.

SPECIFIC ASSUMPTIONS AND HYPOTHESES

A specification of the completed system of statements about foreign policy outputs can now be given form:

Axiom 1   A given nation's behavior toward a specific object is a function of its past behavior from that object; more simply, behavior is a function of inertia and reciprocity.

Axiom 2   Provided that the communications channel is not overloaded, the more heterogeneous the signals sent from one nation to another in a given time period, the more certain are observers in specifying an appropriate response.

Theorem 1   In periods of high relative uncertainty reciprocity is a better predictor of foreign policy output of a nation than is inertia, while in periods of low uncertainty inertia is a stronger influence than is reciprocity.

Axiom 3   The development of complex patterns of inter-
active behavior is dependent upon relatively
frequent and consistent exchanges in the past.

The CREON data collection comprises three months from each
of the ten years 1959-1968. Since data are available for only one
quarter from each year, our ability to test Theorem 1 is limited to
testing the effect of signal heterogeneity upon reciprocity; any test
of inertial effects would require contiguous data.

The propositions applicable to the CREON data set which we
have been laboring toward may now be stated:

Proposition 1:   Reciprocity will be lower in periods of
low uncertainty than in periods of
high uncertainty.
Proposition 2:   The complexity in patterns of interactions
will be greater in dyads which inhibit fre-
quent exchanges than in dyads which interact
only infrequently.

SUMMARY

At this point in the development of a theory of foreign policy
exchange , a self-contained explanation has been reached. But foreign
policy exchanges should not be considered as a monotonous ballet in
which all players are governed by identical restraints placed upon them
through the parameters of inertia and reciprocity. It is to be argued
here that a number of other forces are operating both within the nation
and within the nation's environment which influence the degree to which
a nation reciprocates behavior received or chooses to continue past be-
havior. These indirect forces which are at work in the decision-making
process are not as yet, formally developed but likely candidates can be
identified.

Certainly the pressure of domestic events would seem to act as an important instrument or force in influencing a nation to over or under respond to the receipt of behavior from other nations (Phillips,1973). During periods of intense domestic activity, key decision-makers must devote energies to solving or controlling the internal disruption to the degree that their time is consumed with domestic events, their ability to orchestrate foreign policy is minimized. Since this is the case, we would expect over and under responses to opponent's moves during these periods. One way in which domestic events and international situations may interact to create pressures upon the choice of routines being employed is by changing the level of decision-makers involved in a decision. In its simplest case we can divide decision-makers into two groups; working level bureaucrats and senior political offices away from foreign affairs. On the other hand, international crises ought to draw senior political offices into the decision process.

Third party actions are also considered to be influencing the action and reaction model that has been set out here. At the data collection level, Hermann and Salmore point out the need for considering the indirect object of a behavioral action (1970). Phillips and Hainline (1973) have studied the secondary impact of actions in the stimulus response models developed here of the triad--Soviet Union, United States, and China. Phillips and Callahan (1973) have attempted to formalize this position to account for the indirect efforts of third parties on the behavior of a dyad.

Perhaps the most important of a nation's basic functions is its ability for self-transformation "[t]o respond to events in its environment in new ways or at least in different and more rewarding ways" (Deutsch, 1968:17). Upon close investigation, Deutsch finds that there is a certain underlying similarity between the governing or self-governing of ships and machines and the governing of human organizations (such as foreign-policy-making organizations). "Steering a ship implies guiding the future behavior of the ship on the basis of information concerning the past performance and present position of this ship itself in relation to some external course, goal, or target. In such cases the next step in the behavior of the system must be guided in part by information concerning its own performance in the past" (1968:182). Deutsch proceeds to suggest that all self-steering networks have three basic elements: receptors, effectors, and feedback controls (1968:182). Whatever ability to act autonomously an organization such as a nation-state may have is in its feedback controls. Norbert Weiner defines these feedback controls:

> This control of a machine on the basis of its
> actual performance rather than its expected
> performance is known as feedback, and involves
> sensory members which are actuated by motor
> members and perform the function of telltales
> or monitors, that is, of elements which indicate
> a performance . . . (1950:12).

Deutsch develops the notion of steering based upon feedback in considerable detail. "Steering is always employed with reference to both a purpose, or goals, and an evaluation of previous successes and failures through the mechanism of feedback.

What has been attempted here is a rationale for looking at
the exchanges between nations. It appears to be the case that nations
attempt to achieve reciprocity in matching outputs to inputs. But
this consistency is a function of their goals and the information, or
feedback, they have of previous success and failure. What must follow
is an attempt to expand upon these notions and to identify those
forces which make the process a dynamic one with a good deal more fluc-
tuations than simple matching routines would suggest.

FOOTNOTES

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2. "This theory is about general tendencies common to all nations; about how they resent defiance, how they suspect defense to be concealed aggression, and how they respond to imports by sending out exports; about how expenditure on armaments is restrained by the difficulty of paying for them; and lastly, about grievances and their queer irrational ways, so that a halting apology may be received as though it were an added insult." (Richardson, 1960:13).

3. Research in psychology tends to support the notion of reciprocity. Taylor (1965) and Tognoli (1967) provide evidence suggesting that increases in the intimacy of a subject are due to the increasing intimacy of his companion's remarks. Changes in the rate of smiling also tend to be reciprocated in the same time (Kendon, 1967). Explanation for the norm of reciprocity may be found in Gouldner (1960) and Pruitt (1965, 1968). Homans (1961) has attempted to explain reciprocity in terms of stimulus-response learning theory.

4. Goldman (1972:70) describes similar communication rules for domestic politics.

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TABLE 1

Eight Behavioral Variables Used

The eight behavior types (behavioral variables) used in this study are derived from the Sequential Action Scheme of the CREON codebook.

	Variable Number and Name	Definition
b_1	PARTICIPATION	All "Procedural" statements
b_2	DIPLOMATIC EXCHANGE	All "Evaluative" except "Procedural" statements
b_3	VERBAL COOPERATION	All "Desire" and "Intent" except "Procedural" which are seen as "Desired" or "Neutral" by Actor
b_4	VERBAL CONFLICT-DEFENSIVE	All "Elicited" "Desire" and "Intent" except "Procedural" seen as "Undesired" by Actor
b_5	VERBAL CONFLICT-OFFENSIVE	All "Unelicited" "Desire" and "Intent" except "Procedural" seen as "Undesired" by Actor
b_6	COOPERATIVE ACTION	All "Deeds" seen as "Desired" by Actor
b_7	NON-MILITARY CONFLICT ACTION	"Symbolic" and "Significant" "Deeds" seen as "Undesired" by Actor
b_8	MILITARY CONFLICT ACTION	"Military" "Deeds" seen as "Undesired" by Actor